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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: Naoki HASHIMOTO et al.

Title: PACKET TRANSMISSION SYSTEM AND PACKET RECEPTION SYSTEM

Appl. No.: 10/671,905

Filing Date: 9/29/2003

Examiner: David R. Lazaro

Art Unit: 2455

Confirmation Number: 1546

REPLY BRIEF UNDER 37 C.F.R. § 41.41

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Examiner's Answer dated September 4, 2009, Appellants submit this Reply Brief. No fee is believed to be required. However, in the event it is determined that a fee is required, authorization is hereby given to charge deposit account 19-0741.

Appellants maintain that the rejections set forth in the Examiner's Answer should be rejected because the prior art relied upon does not establish *prima facie* obviousness of the claimed subject matter. The following responds to points set forth in the Examiner's Answer at Section (10) in response to Appellants' Appeal Brief.

I. Claims 1-3 and 5-11 Are Patentable Over Prior Art

Independent claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graham in view of Wilford and Tajika. Claims 2-3 and 5-11 depend from claim 1, and are

rejected as being unpatentable over the above combination or as being unpatentable over the combination of Graham, Wilford and Tajika in further view of one or more of Birdwell, Meizlik, Barkai, and Sharony. Appellants respectfully assert that a *prima facie* case of obviousness has not been established for at least the reasons set forth below.

Independent claim 1 recites a packet transmission system "comprising sorting means for sorting a packet according to whether the packet should be transmitted in a unicast form or in a simultaneous packet form by multicast or broadcast; packet identification information addition means for adding packet identification information to the packet if the packet is sorted as a packet to be transmitted in the simultaneous packet form by the sorting means; and transmission means for transmitting said packet that is allocated said packet identification information a plurality of times even if the packet transmission system does not receive a retransmission request from a reception side, wherein said transmission means transmits said packet that is allocated said packet identification information and a redundant packet which is a duplicate of said packet that is allocated said packet identification information, and wherein said packet and said redundant packet transmitted with the same packet identification information contains an identical sequence number."

In response to the Appellants' argument that "the step of sorting unicast and multicast packets of Wilford, if added to the Graham method, would not improve the process speed of the Graham method and indeed would slow down the processing speed because the extra (not needed) sorting step would inherently take extra time and generate extra cost," the Examiner's Answer points to column 5, lines 24-32, of Graham, and alleges that since certain network topologies may necessitate or benefit from the use of certain protocols, such as multicast or broadcast, Graham is in no way limited to unicast as argued by appellant (*See* Examiner Answer, Page 19). Appellants respectfully disagree.

The cite portion of Graham discloses that "The Hypertext Transfer Protocol (HTTP) is one type of well-know request/response protocol... However, the present invention is in no way limited to the use of any particular communication protocol or any particular network topology." However, the foregoing statement of Graham is not supported by any specific description or examples. More importantly, such a broad unsupported statement that "any

particular communication protocol or any particular network topology may be used" does not necessarily teach that multicast protocol may be used, especially in light of Graham's disclosure directed to transmit metering packets generated by a client from the client to a census service (*See* Graham, Abstract; *see* also Graham, column 2, lines 28-30).

Furthermore, even if there were a reason to use a multicast protocol for transmitting the metering packets from the client to the census service, one of ordinary skill in the art would have no reason to transmit some of the metering packets by multicast protocol while transmitting others of the metering packets, which are essentially the same type of packets, by a different (e.g., unicast) protocol. Thus, even if there were a reason to use a multicast protocol for transmitting the metering packets from the client to the census service, such a modified Graham would *merely* teach transmitting *all* metering packets by multicast protocol, rather than transmitting some metering packets by multicast protocol and some by unicast protocol. In other words, Graham at the best teaches that *either* transmitting all packets by multicast protocol *or* transmitting all packets by unicast protocol.

Thus, Appellants assert the position that the step of sorting unicast and multicast packets of Wilford, if added to the Graham method, in which *either* all multicast packets *or* all unicast packets are to be transmitted, would not improve the process speed of the Graham method and indeed would slow down the processing speed because the extra (not needed) sorting step would inherently take extra time and generate extra cost.

For at least the above reasons, Appellants respectfully assert that the general comment of "the invention design provides for low latency/high speed packet routing," as stated on page 2, lines 6-8, of the Advisory Action, does not constitute a motivation for one of ordinary skill in the art to combine Wilform and Graham. Thus, Appellants respectfully submit that a *prima facie* case of obviousness has not been established for at least the above explained reasons.

Tajika, Birdwell, Meizlik, Barkai, and Sharony were cited for disclosing other features of the claims, but fails to cure the above deficiencies.

Claims 2-3 and 5-11 depend from claim 1, and thus are patentable for at least the same reasons as claim 1.

Thus, Appellants respectfully assert that the rejection of claims 1-3 and 5-11 is improper and should be reverse for at least the above explained reasons.

II. Claims 12-14 and 16-23 Are Patentable Over Prior Art

Claim 12 is rejected under 35 U.S.C. 102(e) as being unpatentable over Daudelin. Claims 13-14 and 16-23 under 35 U.S.C. 103(a) as being unpatentable over Daudelin in further view of one or more of Wilford, Birdwell, Chen, Barkai, Qaddoura and Sharony. Appellants respectfully submit that prior art fails to teach all elements recited in claims 12-14 and 16-23 for at least the reasons set forth below.

Independent claim 12 recites "reception means for receiving duplicate packets that are allocated packet identification information once or a plurality of times without a retransmission request."

The Examiner's Answer construes the term "retransmission request" as "a form of message specifically requesting retransmission" (see Examiner's Answer, Page 23). However, the Examiner's Answer further asserts that "there is no retransmission request of any kind in Daudelin" (see Examiner's Answer, page 23, lines 3-4). Appellants respectfully disagree.

Appellants respectfully submit that "a form of message specifically requesting retransmission" should be read as a form of message that triggers an action of retransmission, while absent of such form of message the retransmission would not be performed. Thus, the question at issue becomes whether or not there is a form of message that triggers the action of retransmission while absent of such form of message the retransmission would not be performed in Daudelin system. Appellants respectfully submit that there is such a form of message. Daudelin indeed requires a form of message that triggers a retransmission of a

packet for at least the reasons that follows. Specifically, column 2, lines 48-64, of Daudelin reads:

> ... if a receiver acknowledgment indicating successful reception has been received, the packet previously sent is removed from the head of its queue. Otherwise, the packet is left at the head of its queue, the queue is placed in a "pending retry" state, and a short, "pending retry" timer, preferably, a hardware timer, is started ...
>
> When the pending retry timer expires, a hardware process or a software transmit complete interrupt service routine, moves all queues associated with the pending retry timer out of the pending retry state, enabling their packets to be transmitted again. (Emphasis added.)

Thus, Daudelin explicitly teaches that *only* the packet, of which a receiver acknowledgement is not received, would be retransmitted. In other words, Daudelin *fails* to teach receiving duplicate packets regardless of whether the packet has been previously received by the reception side or not, as recited in the instant invention. Instead, in Daudelin system, removing the packet from the head of its queue (i.e., "not sending a duplicate packet") is triggered by the information of receiving a receiver acknowledgement, and starting a pending retry timer (i.e., "sending a duplicate packet") is triggered by the information of not receiving a receiver acknowledgement. In other words, the information of not receiving a receiver acknowledgement in Daudelin system is indeed a form of message specifically requesting retransmission, because absent of such information (i.e., when a receiver acknowledgement is received) a duplicate packet would not be sent.

Thus, the information of not receiving a receiver acknowledgement in Daudelin system indeed constitutes an "retransmission request," teaching away from "reception means for receiving duplicate packets that are allocated packet identification information once or a plurality of times without a retransmission request," as recited in claim 12.

Wilford, Birdwell, Chen, Barkai, Qaddoura, and Sharony were cited for disclosing other features of the claims 13-14 and 16-23, but fail to cure the above deficiencies of Daudelin.

Thus, Appellants respectfully submit that the rejection of claims 12-14 and 16-23 is improper and should be reverse for at least the above explained reasons.

III. Conclusion

For the foregoing reasons, Appellants request that the final rejection be reversed.

Respectfully submitted,

Date 11/3/2009 By _____

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